Ozone Season Summary 2010

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MWAQC, COG

September 22, 2010

Ozone Season Summary (2010)

Peak 8-Hour Ozone Concentrations (ppb)

Data based on the 8-hour standard set at 75 ppb.

- 3 Code Red Days
- 30 Code Orange Days
- 43 Code Yellow Days
- 56 Code Green Days

*** Analysis is based on draft data until September 10, 2010. Data is subject to change.**

Daily Peak 8-hour Ozone Concentration (PPB)
Washington Area-2010

MAY

Sun	Mon	Tues	Wed	Thurs	Fri	Sat
						1: 74
2: 37	3: 31	4: 63	5: 75	6: 75	7: 60	8: 55
9: 50	10: 55	11: 52	12: 46	13: 42	14: 50	15: 61
16: 57	17: 44	18: 43	19: 35	20: 67	21: 76	22: 50
23: 34	24: 39	25: 41	26: 70	27: 87	28: 49	29: 55
30: 67	31: 57					

JUNE

Sun	Mon	Tues	Wed	Thurs	Fri	Sat
		1: 55	2: 80	3: 70	4: 77	5: 53
6: 43	7: 47	8: 56	9: 50	10: 63	11: 75	12: 82
13: 56	14: 59	15: 50	16: 44	17: 62	18: 83	19: 74
20: 65	21: 82	22: 87	23: 76	24: 64	25: 80	26: 76
27: 65	28: 54	29: 69	30: 58			

JULY

Sun	Mon	Tues	Wed	Thurs	Fri	Sat
				1: 53	2: 57	3: 82
4: 86	5: 82	6: 90	7: 100	8: 93	9: 70	10: 47
11: 65	12: 59	13: 58	14: 56	15: 78	16: 70	17: 71
18: 58	19: 54	20: 60	21: 54	22: 67	23: 75	24: 62
25: 54	26: 65	27: 72	28: 77	29: 55	30: 60	31: 73

AUGUST

Sun	Mon	Tues	Wed	Thurs	Fri	Sat
1: 55	2: 56	3: 50	4: 68	5: 65	6: 66	7: 77
8: 68	9: 79	10: 92	11: 97	12: 67	13: 35	14: 43
15: 30	16: 66	17: 89	18: 52	19: 88	20: 81	21: 75
22: 53	23: 61	24: 30	25: 46	26: 62	27: 65	28: 76
29: 81	30: 98	31: 88				

SEPTEMBER

Sun	Mon	Tues	Wed	Thurs	Fri	Sat
			1: 86	2: 83	3: 83	4: 42
5: 53	6: 61	7: 69	8: 60	9: 47	10:	11:
12:	13:	14:	15:	16:	17:	18:
19:	20:	21:	22:	23:	24:	25:
26:	27:	28:	29:	30:		

2010 Ozone Exceedances

Date	# of Monitors Exceeding	Highest Monitor	Highest Concentration (ppb)
5/21/2010	1	Rockville	76
5/27/2010	4	HU-Beltsville	87
6/2/2010	1	HU-Beltsville	80
6/4/2010	1	HU-Beltsville	77
6/12/2010	1	Rockville	82
6/18/2010	2	Franconia	83
6/21/2010	3	Calvert Co.	82
6/22/2010	5	HU-Beltsville	87
6/23/2010	1	Calvert Co.	76
6/25/2010	1	Prince Georges Co.	80
6/26/2010	1	HU-Beltsville	76
7/3/2010	3	HU-Beltsville	82
7/4/2010	5	River Terrace	86
7/5/2010	3	Calvert Co.	82
7/6/2010	10	Prince Georges Co.	90
7/7/2010	13	McMillan Reservoir	100
7/8/2010	3	Frederick Co.	93
7/16/2010	3	Aurora Hills	78

Date	# of Monitors Exceeding	Highest Monitor	Highest Concentration (ppb)
7/28/2010	1	HU-Beltsville	77
8/7/2010	1	River Terrace	77
8/9/2010	1	HU-Beltsville	79
8/10/2010	11	River Terrace	92
8/11/2010	10	Calvert Co.	97
8/17/2010	6	Aurora Hills	89
8/19/2010	4	River Terrace	88
8/20/2010	6	McMillan Reservoir	81
8/28/2010	1	Aurora Hills	76
8/29/2010	2	River Terrace	81
8/30/2010	10	Calvert Co.	98
8/31/2010	8	McMillan Reservoir	88
9/1/2010	5	McMillan Reservoir	86
9/2/2010	4	Frederick Co.	83
9/3/2010	1	Frederick Co.	83

*** Analysis is based on draft data until September 10, 2010. Data is subject to change.**

August 28th to September 3rd Poor Air Quality Event

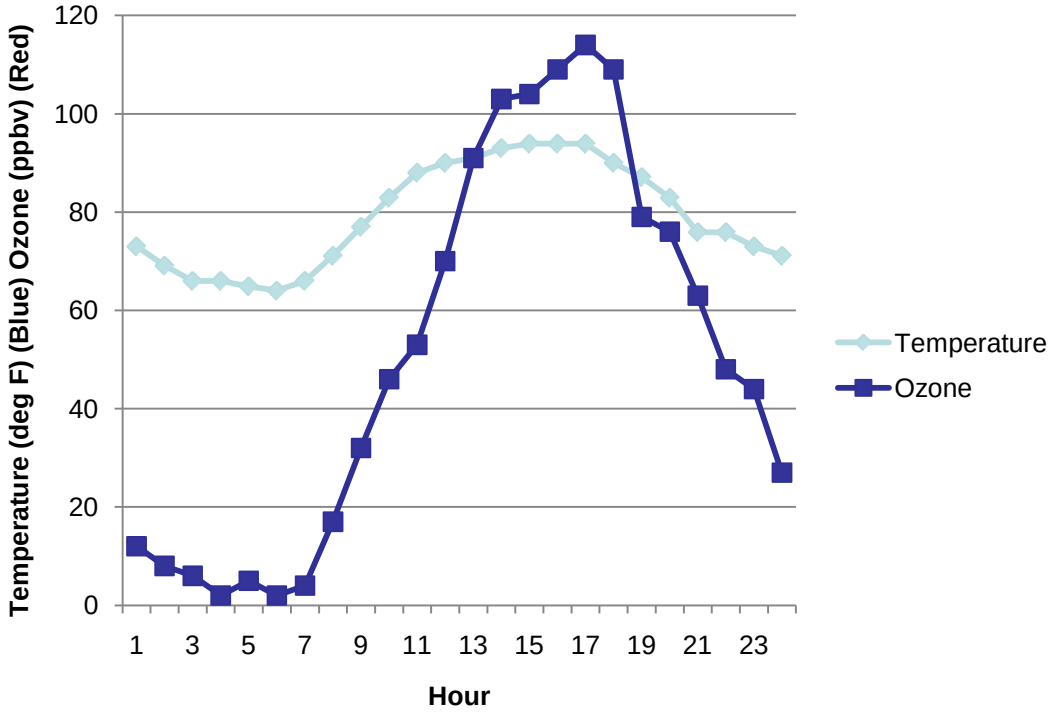
- Week long high pressure & temperature event.
- Limited clouds allowed for intense sunlight (and record temperatures.
- Usually re-circulating light winds kept bringing polluted air back into the region.
- All three factors above led to conditions favorable to high ozone levels.

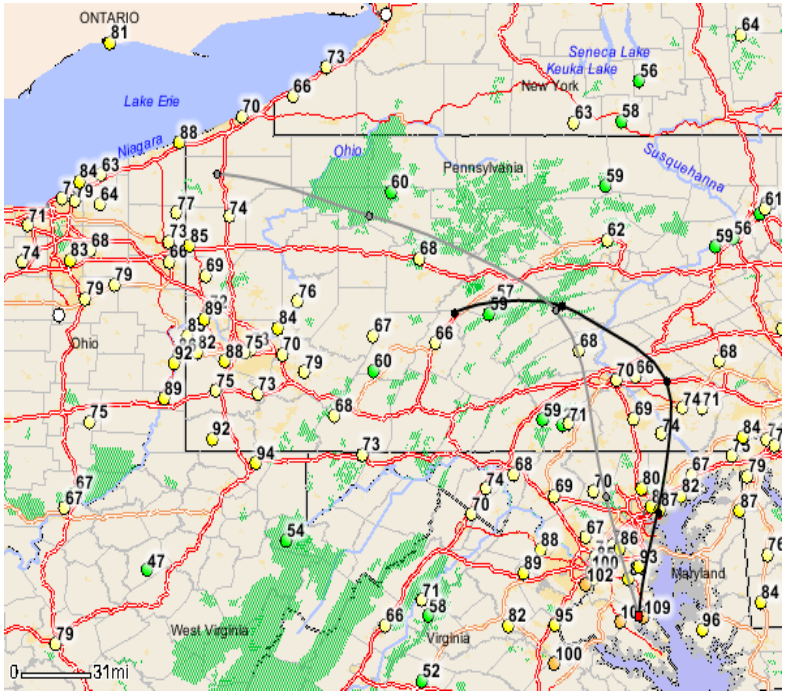
August 30th Code Red

of Monitors in Exceedance: 10
1 Monitor in Code Red (Calvert Co., MD)
Maximum 8-Hour Ozone: 98 ppb (Calvert Co., MD)

Wind Trajectory at 3 PM (August 30th) (500 &1000 m)

August 30th Temperature (Dulles) and Ozone (Calvert)

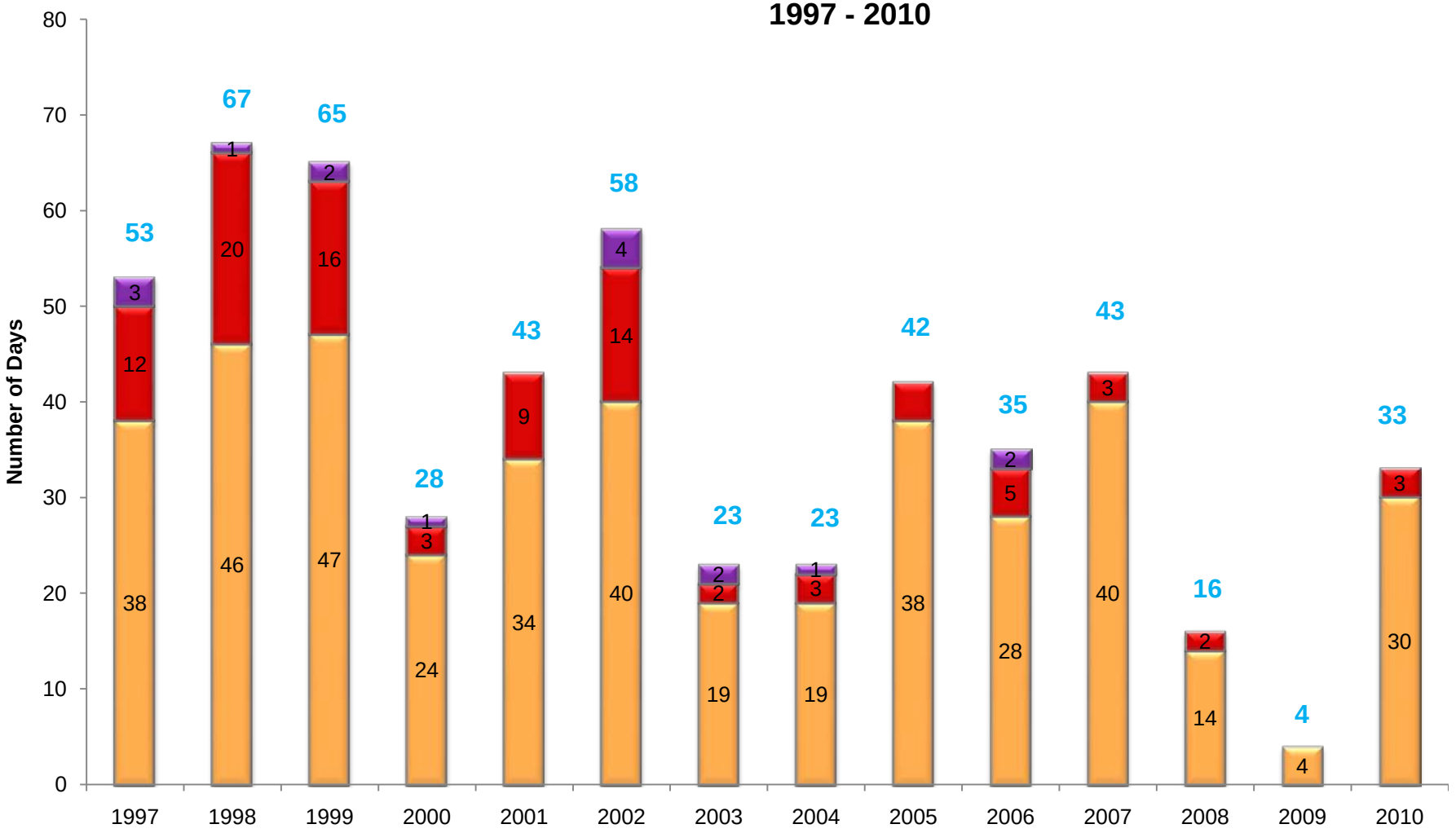




Ozone Exceedance Trend

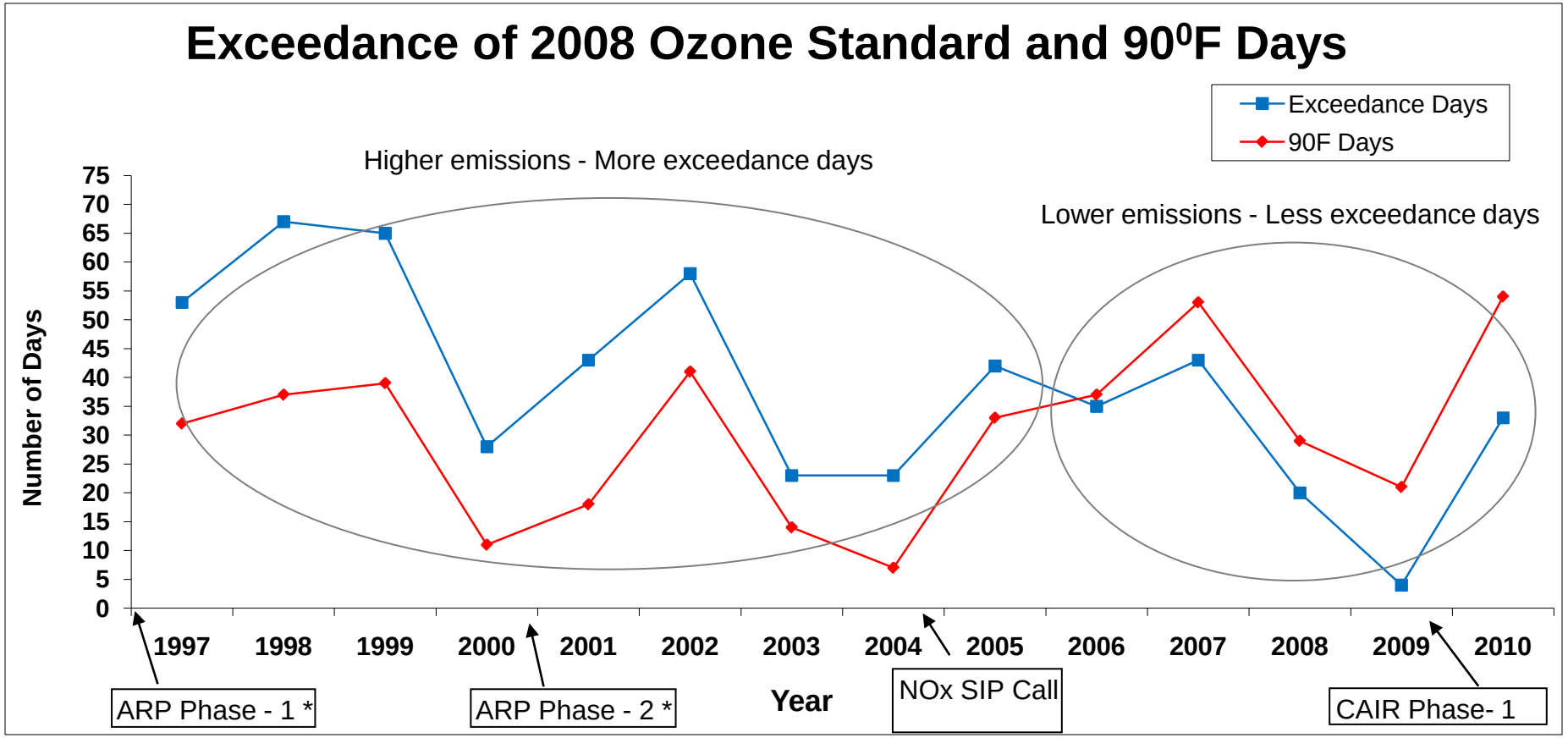
Number of Exceedance Days - 2008 Ozone Standard (75 ppb)

Breakdown of Code Orange, Red, and Purple Days
1997 - 2010

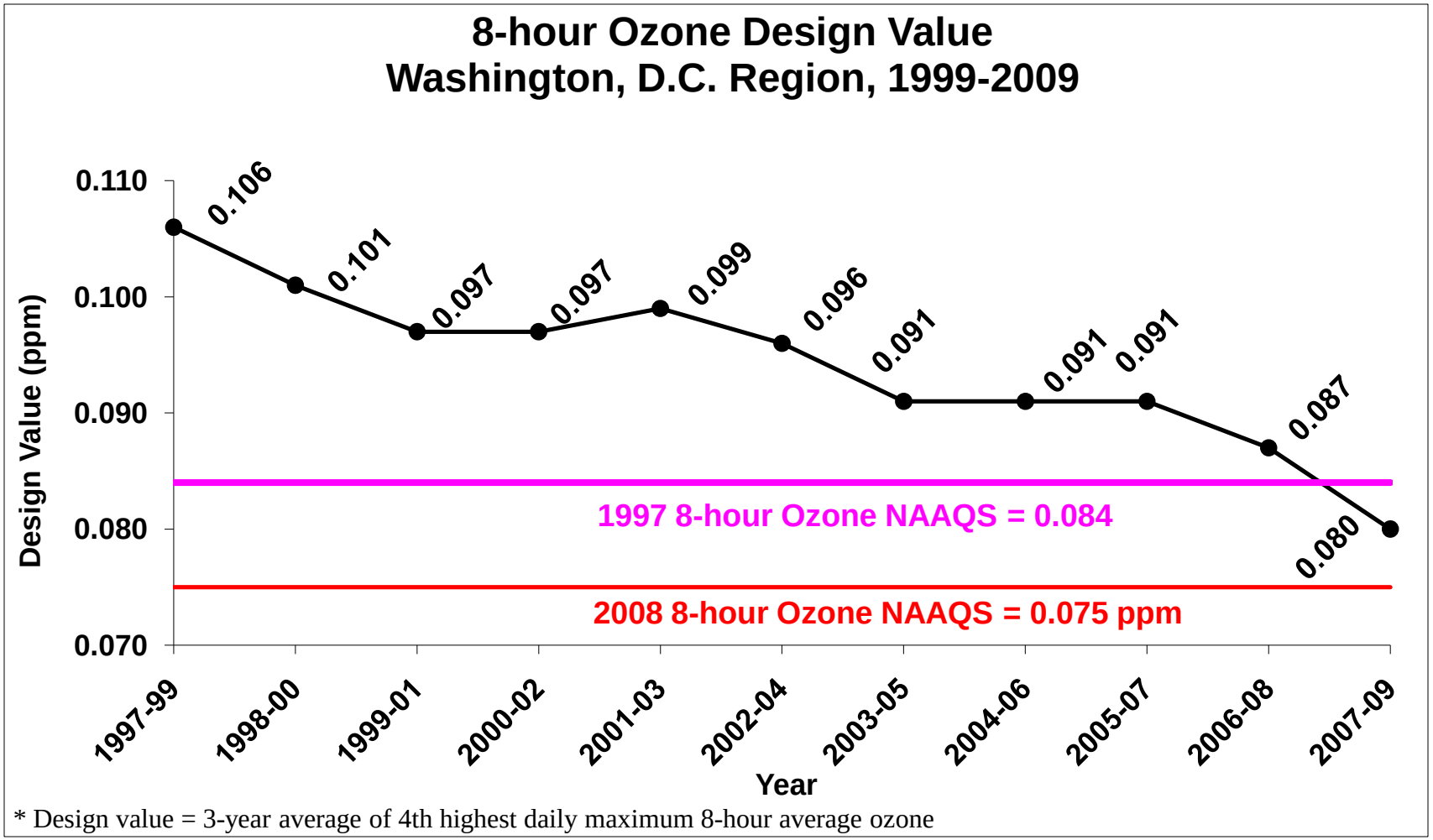


*** 2010 analysis is based on draft data as of 09.10.10 and is subject to change.**

Ozone Exceedance Trend



Ozone Design Value Trend



* Design value = 3-year average of 4th highest daily maximum 8-hour average ozone

Fine Particle Summary (2010)

24-Hour PM2.5 Concentrations (ug/m3)

Data based on the 24-hour standard set at 35.5 ug/m3.

4 Code Orange Days

51 Code Yellow Days

77Code Green Days

*** Analysis is based on draft data until September 10, 2010. Data is subject to change.**

Daily 24-Hour Particle Concentration (ug/m3)
Washington Area-2010

MAY

Sun	Mon	Tues	Wed	Thurs	Fri	Sat
						1 16
2 20	3 13	4 10	5 10	6 11	7 6	8 10
9 4	10 5	11 5	12 15	13 12	14 15	15 8
16 9	17 7	18 3	19 8	20 10	21 15	22 9
23 5	24 6	25 8	26 11	27 18	28 10	29 14
30 11	31 16					

JUNE

Sun	Mon	Tues	Wed	Thurs	Fri	Sat
		1 8	2 15	3 13	4 17	5 15
6 11	7 7	8 7	9 13	10 13	11 12	12 18
13 14	14 19	15 15	16 20	17 13	18 11	19 18
20 17	21 16	22 23	23 19	24 21	25 17	26 29
27 28	28 15	29 13	30 7			

JULY

Sun	Mon	Tues	Wed	Thurs	Fri	Sat
				1 7	2 7	3 11
4 17	5 39	6 38	7 39	8 27	9 9	10 9
11 10	12 15	13 12	14 11	15 21	16 28	17 23
18 17	19 15	20 21	21 11	22 16	23 34	24 29
25 24	26 8	27 18	28 29	29 20	30 14	31 22

AUGUST

Sun	Mon	Tues	Wed	Thurs	Fri	Sat
1 13	2 9	3 12	4 25	5 14	6 25	7 24
8 27	9 39	10 29	11 33	12 20	13 8	14 6
15 9	16 14	17 17	18 16	19 21	20 22	21 27
22 16	23 9	24 7	25 8	26 11	27 10	28 17
29 20	30 19	31 19				

SEPTEMBER

Sun	Mon	Tues	Wed	Thurs	Fri	Sat
			1 24	2 23	3 24	4 7
5 5	6 8	7 12	8 12	9 7	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30		